UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,689	09/30/2003	Min Kuo	66329/00020	6171

23380 7590 12/12/2007	**EXAMINER**
TUCKER ELLIS & WEST LLP	MCLEAN, NEIL R
1150 HUNTINGTON BUILDING	

ART UNIT	PAPER NUMBER
2625	

925 EUCLID AVENUE
CLEVELAND, OH 44115-1414

NOTIFICATION DATE	DELIVERY MODE
12/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@tuckerellis.com
mary.erne@tuckerellis.com

PTOL-90A (Rev. 04/07)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>. 10/675,689</td><td>KUO ET AL.</td><td></td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Neil R. McLean</td><td>2625</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7-12,14,16-20,22,24-26,28,and 30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7-12,14,16-20,22,24-26,28 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 9/20/2007 have been fully considered but they are

not persuasive.

2.   Applicant argues that the art cited (Owa) is "directed to a system in which a user

is given information relative to capabilities of alternative printing devices. Such

capabilities include finishing functions available to the printer." Applicant refers to

limitations "wherein a user selects whether **optimization** is desirable".

3.   The Examiner perceives the applicants view of optimization to be the routing of

print jobs to the printing device which has the smallest print queue as described in

applicants specification page 1, lines 10-13; "...this invention is directed to a system and

method for optimized routing of print jobs to maximize the printing speed of a

network....by sending the print job to the printer having the smallest print queue."

4.   Owa teaches "a printing system and printing method that can select an **optimum**

printer for printing from among the printers connected to a host computer..."; (Column 2,

lines 1-10).

5.   Owa has a status monitor section that monitors the status of each printer,

including the "data amount waiting for print"; Column 4, lines 9-10, which the Examiner

perceives as the print queue.

6. Referring to Figure 6: Owa's flowchart Step S19 Selects the printer having the

highest score as the optimum printer. Owa allows the user to determine what

conditions receive priority (Column 5, lines 9-14).

7. Therefore Owa's method and system provides for the routing of a print job to the

printer that has the smallest print queue if the user chooses to prioritize in such a

manner.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 19-20, 22, 24-26, 28 and 30 are rejected under 35 U.S.C. 101 because the

claimed invention is directed to non-statutory subject matter.

In claims 19-20, 22, 24-26, 28 and 30, a "computer program" is being recited;

however, computer program would reasonably be interpreted by one of ordinary skill in

the art as software, per se.   This subject matter is not limited to that which falls within a

statutory category of invention because it is limited to a process, machine, manufacture,

or a composition of matter. Software is a function descriptive material and a function

descriptive material is non-statutory subject matter.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Owa et al. (US 6,348,971) in view of well known prior art.

Regarding Claim 1:

Owa et al. teaches a system for optimized routing of print jobs comprising:

        means adapted for commencing a print job to a print port associated with

a client machine (Column 4, lines 44-52; See Figure 1);

        queuing means (Input Buffer 63 in Figure 8) adapted for queuing print job

data in accordance with a commenced print job (Column 18, lines 6-10);

        means adapted for receiving a print optimization instruction from an

associated user (Column 18, lines 11-18; Printer information retentions means;

Column 2, lines 1-10);

        means adapted for selectively communicating the print job data to the print

port so as to generate a printout therefrom (Column 4, lines 44-52; See Figure 1);

        terminal means (See Status Monitor Section 13 in Figure 2) adapted for

receiving status data (See Status Information in Figure 4) from each of a plurality

of associated printer devices, which status data includes data representative of a

commitment level of <u>each</u> associated printer device relative to <u>prior</u> print job

requests <u>associated therewith</u> (Column 4, lines 6-13 and see Status Monitor

Section 13 in Figure 2 and Flowchart Step S3 in Figure 6);

<u>means adapted for receiving a print optimization instruction from the</u>

<u>associated user in response to an issued prompt so as to commence selection of</u>

<u>an alternative associated print device for printing</u>(Column 18, lines 11-18; Printer

information retentions means)<u>;</u>

test means (the software or device that performs the functions described

in Column 5, lines 41-60) adapted for testing the status data against selected test

criteria (See Printer Selection Conditions in Figure 5) to determine whether at

least one alternative associated printer device is desired for printing (Column 5,

lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section

11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

the terminal means (See Data Transfer Section 17 in Figure 2) including

means adapted for selectively redirecting the print job data from a primary

designated associated printer device <u>by assigning the print port to a device port</u>

<u>of</u> a secondary associated printer device <u>of the plurality thereof</u> in accordance

with <u>the print optimization instruction and</u> an output of the test means (Column 7,

lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for

queuing print job data.

However it is well known in the art for a computer to have a buffer for providing

temporary storage of data that is to be processed at a later time.

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in

the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being

lost by using a buffer; and it would also prevent the host from sending print data to the

printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing

system of Owa et al. to obtain the invention of Claim 1.

Regarding Claim 2:

The system for optimized routing of print jobs of claim 1 wherein the test

criteria includes data representative of a commitment level of the at least one

alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps

S16 and S17 in Figure 6).

Regarding Claim 3:

The system for optimized routing of print jobs of claim 2 wherein the print

job data is selectively redirected to the secondary associated printer device

which has the lowest commitment level (Column 7, lines 3-6 and see Flowchart

Steps S19/S21 in Figure 6).

Regarding Claim 4:

    Cancelled

Regarding Claim 5:

    The system for optimized routing of print jobs of claim 2 further

comprising means adapted for storing user selection data which pre-authorizes

automatic routing of print job data to the secondary associated printer device

(Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 6:

    Cancelled

Regarding Claim 7:

    The system for optimized routing of print jobs of claim 1 wherein the

means adapted for selectively redirecting the print job data the further comprises

means adapted for displaying all available associated printer devices for the user

to select a secondary associated printer device in which to route the print job

data (Column 12, lines 55-60).

Regarding Claim 8:

The system for optimized routing print jobs of claim 6 wherein the means adapted for redirecting the print job data further comprises:

means adapted to receive user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminating means adapted to terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

Regarding Claim 9:

The system for optimized routing of print jobs of claim 1 wherein the means adapted for prompting an associated user is a graphical user interface (See Figures 12a and 12b).

Regarding Claim 10:

A method for optimized routing of print jobs comprising the steps of:

Commencing a print job to a print port associated with a client machine (Column 4, lines 44-52);

Queuing print job data in accordance with a commenced print job (Column 4, lines 44-52);

Issuing a prompt to an associated user for a print optimization authority

(Figure 4);

selectively communicating the print job data to the print port so as to

generate a printout therefrom (Column 4, lines 44-52 and see Print Data

Generation Section 18 in Figure 2);

receiving status data (See Status Information in Figure 4) from each of a

plurality of associated printer devices, which status data includes data

representative of a resource commitment level of each associated printer device

relative to prior print job requests (Column 4, lines 6-13 and see Status Monitor

Section 13 in Figure 2 and Flowchart Step S3 in Figure 6) associated therewith;

testing (the software or device that performs the function described in

Column 5, lines 41-60) the status data against selected test criteria (See Printer

Selection Conditions in Figure 5) to determine whether at least one alternative

associated printer device is desired for printing (Column 5, lines 41-44 and lines

51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and

Flowchart Steps S5 and S6 in Figure 6); and

selectively redirecting the print job data from a primary designated

associated printer device by assigning the print port to a device port of a

secondary associated printer device of the plurality thereof in accordance with

the print optimization instruction and an output of the test means (Column 7, lines

3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing print job data.

However it is well known in the art for a computer to have a buffer for providing temporary storage of data that is to be processed at a later time.

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being lost by using a buffer; and it would also prevent the host from sending print data to the printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing system of Owa et al. to obtain the invention of Claim 10.

Regarding Claim 11:

The method for optimized routing of print jobs of claim 10 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 12:

The method for optimized routing of print jobs of claim 11 wherein the

print job data is selectively redirected to the secondary associated printer device

which has the lowest commitment level (Column 7, lines 3-6 and see Flowchart

Steps S19/S21 in Figure 6).

Regarding Claim 13:

Cancelled

Regarding Claim 14:

The method for optimized routing of print jobs of claim 11 further

comprising the step of storing user selection data which pre-authorizes automatic

routing of print job data to the secondary associated printer device (Column 5,

lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 15:

Cancelled

Regarding Claim 16:

The method for optimized routing of print jobs of claim 13 wherein the

step of selectively redirecting the print job data further comprises the step of

displaying all available associated printer devices for the user to select a

secondary associated printer device in which to route the print job data (Column

12, lines 55-60).

Regarding Claim 17:

The method for optimized routing print jobs of claim 15 wherein the step

of selectively redirecting the print job data further comprises the steps of:

receiving user input to terminate the routing of the print job data to the

secondary associated printer device (Column 13, lines 1-4 and User Approved

Screen 81 in Figure 12b); and

terminate routing of the print job data to the secondary associated printer

device in response to user input (see Cancel button 84 in Figure 12b).

Regarding Claim 18:

The method for optimized routing of print jobs of claim 15 wherein

prompting an associated user is performed via a graphical user interface (See

Figures 12a and 12b).

Regarding Claim 19:

A computer-readable medium for optimized routing of print jobs

comprising:

Means adapted for commencing a print job to a print port associated with

a client machine (Column 4, lines 44-52; See Figure 1);

Queuing means adapted for queuing print job data in accordance with a

commenced print job (Column 4, lines 44-52);

Means adapted for issuing a prompt to an associated user for a print

optimization authority (Figure 4);

means adapted (Column 4, lines 44-52) for selectively communicating the

print job data to the print port so as to generate a printout therefrom (Column 4,

lines 44-52 and see Print Data Generation Section 18 in Figure 2);

terminal means (See Status Monitor Section 13 in Figure 2) adapted for

receiving status data (See Status Information in Figure 4) from each of a plurality

of associated printer devices, which status data includes data representative of a

resource commitment level of each associated printer device relative to prior print

job requests (Column 4, lines 6-13 and see Status Monitor Section 13 in Figure 2

and Flowchart Step S3 in Figure 6) associated therewith;

means adapted for receiving a print optimization instruction from the

associated user in response to an issued prompt so as to commence selection of

an alternative associated print device for printing;

test means (the software or device that performs the function described in

Column 5, lines 41-60) adapted for testing the status data against selected test

criteria (See Printer Selection Conditions in Figure 5) to determine whether at

least one alternative associated printer device is desired for printing (Column 5,

lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section

11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

the terminal means (See Data Transfer Section 17 in Figure 2) including

means adapted for selectively redirecting the print job data from a primary

designated associated printer device <u>by assigning the print port to a device port</u>

<u>of</u> a secondary associated printer device <u>of the plurality thereof</u> in accordance

with <u>the print optimization instruction and</u> an output of the test means (Column 7,

lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing

print job data.

However it is well known in the art for a computer to have a buffer for providing

temporary storage of data that is to be processed at a later time.

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in

the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being

lost by using a buffer; and it would also prevent the host from sending print data to the

printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing

system of Owa et al. to obtain the invention of Claim 19.

Regarding Claim 20:

The computer-readable medium for optimized routing of print jobs of claim 19 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 21:

Cancelled

Regarding Claim 22:

The computer-readable medium for optimized routing of print jobs of claim 20 further comprising means adapted for storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 23:

Cancelled

Regarding Claim 24:

The computer-readable medium for optimized routing print jobs of claim 19 wherein the means for redirecting the print job data further comprises:

means adapted to receive user input to terminate the routing of the print

job data to the secondary associated printer device (Column 13, lines 1-4 and

User Approved Screen 81 in Figure 12b); and

terminating means adapted to terminate routing of the print job data to the

secondary associated printer device in response to user input (see Cancel button

84 in Figure 12b).

Regarding Claim 25:

A computer-implemented method for optimized routing of print jobs

comprising the steps of:

Commencing a print job to a print port associated with a client machine;

Queuing print job data in accordance with a commenced print job;

selectively communicating the print job data to the print port so as to

generate a printout therefrom (Column 4, lines 44-52 and see Print Data

Generation Section 18 in Figure 2);

receiving status data (See Status Information in Figure 4) from each of a

plurality of associated printer devices, which status data includes data

representative of a resource commitment level of each associated printer device

relative to prior print job requests (Column 4, lines 6-13 and see Status Monitor

Section 13 in Figure 13 and Flowchart Step S3 in Figure 6) associated therewith;

testing the status data (the software or device that performs the function

described in Column 5, lines 41-60) against selected test criteria (See Printer

Selection Conditions in Figure 5) to determine whether at least one alternative

associated printer device is desired for printing (Column 5, lines 41-44 and lines

51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and

Flowchart Steps S5 and S6 in Figure 6); and

selectively redirecting the print job data from a primary designated

associated printer device by assigning the print port to a device port of a

secondary associated printer device of the plurality thereof in accordance with a

print optimization instruction and an output of the test means (Column 7, lines 3-6

and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing

print job data.

However it is well known in the art for a computer to have a buffer for providing

temporary storage of data that is to be processed at a later time.

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in

the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being

lost by using a buffer; and it would also prevent the host from sending print data to the

printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing

system of Owa et al. to obtain the invention of Claim 25.

Regarding Claim 26:

The computer-implemented method for optimized routing of print jobs of claim 25 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 27:

Cancelled

Regarding Claim28:

The computer-implemented method for optimized routing of print jobs of claim 26 further comprising the step of storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 29:

Cancelled

Regarding Claim 30:

The computer-implemented method for optimized routing print jobs of claim <u>25</u> wherein the step of selectively redirecting the print job data further comprises the steps of:

receiving user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato (US 6,760,120) teaches a system that automatically selects an optimum printing device according to the characteristics of a page in units of pages to print the page, thereby reducing the load on the operator in print processing.

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Neil R. McLean whose telephone number is 571.

270.1679. The examiner can normally be reached on Monday through Friday 7:30AM-

5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, King Poon can be reached on 571.272.7440. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. McLean
11/7/2007

KING Y. POON
SUPERVISORY PATENT EXAMINER